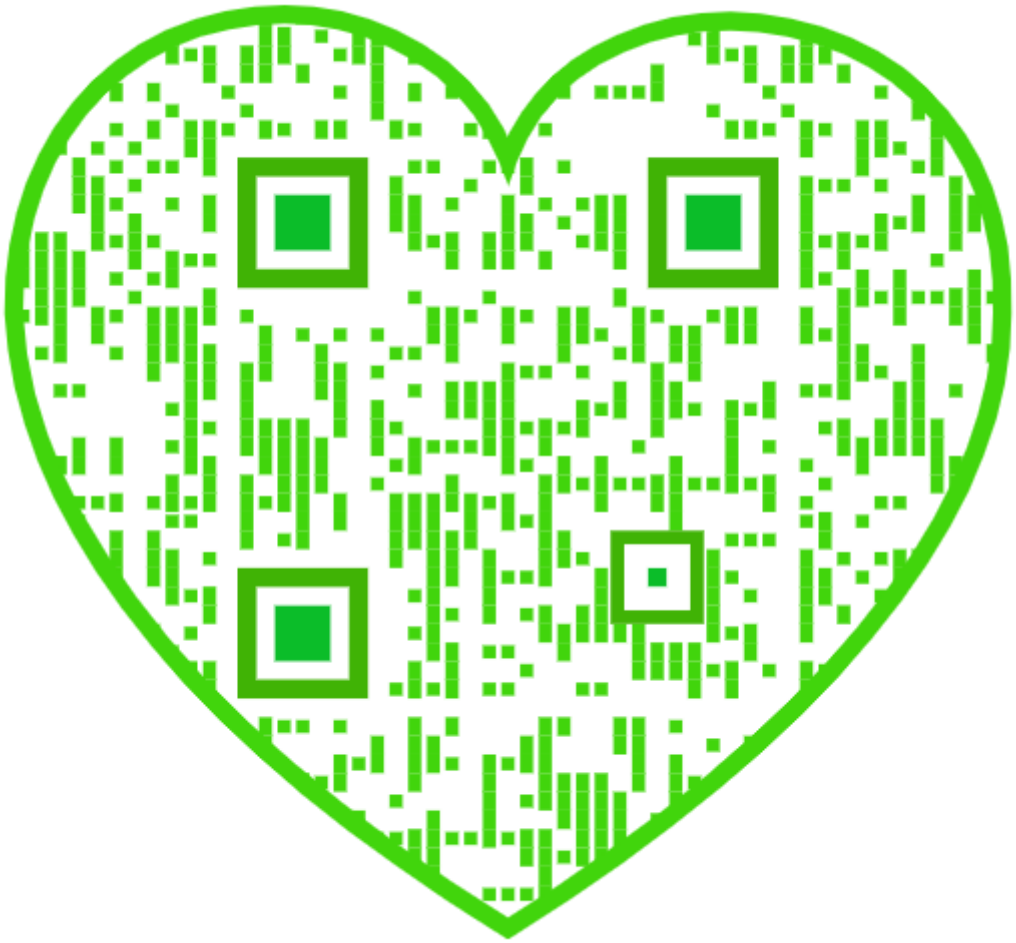
CHAPTER VII

BEVERAGE PLANTS OF FIELD AND WOOD

And sip with nymphs their elemental tea.
Pope.

MAN dearly loves a sup of drink with his meat, and when our pioneer ancestors in the American wilderness ran short of tea and coffee and craved a change from cold water, they found material for more or less acceptable substitutes in numerous wild plants. Particularly during the American Revolution was interest awakened in these, and several popular plant-names still current date from those days of privation. Again during our Civil War the attention of residents in the South was similarly drawn to the wild offerings of nature. A literary curiosity, now rare, of those dark days may still be turned up in libraries, a book entitled "Resources of Southern Fields and Forests ... with practical information on the useful properties of the Trees, Plants and Shrubs," by Francis Peyre Porcher, Charleston, S. C., 1863, the writer being then a surgeon in the Confederate Army.



Among such beverage plants one of the best known is a little shrub, two or three feet high, frequent in dry woodlands and thickets of the eastern half of the continent from Canada to Texas and Florida, commonly called New Jersey Tea, the *Ceanothus Americanus*, L., of the botanists. It is characterized by pointed, ovate, toothed leaves, two or three inches long, strongly 3-nerved, and by a large, dark red root, astringent and capable of yielding a red dye. This last feature has given rise to another name for the plant in some localities-Red Root. In late spring and early summer the bushes are noticeable from the presence of abundant, feathery clusters of tiny, white, long-clawed flowers which, if examined closely, are seen to resemble minute hoods or bonnets extended at arm's length. The leaves contain a small proportion of a bitter alkaloid called ceanothine, and were long ago found to make a passable substitute for Chinese tea. During the Revolutionary War an infusion of the dried leaves as a beverage was in common use, both because of the odium attached to real tea after the taxation troubles with England, and from motives of necessity. Connoisseurs claim that the leaves should be dried in the shade. There are a score or more of species of *Ceanothus* indigenous to the Pacific coast, where

NEW JERSEY TEA
(Ceanothus Americanus)

they are known as "myrtle" or "wild lilac"; but I have not heard of their leaves being used like those of the eastern species mentioned. These plants will be referred to again in the chapter on Vegetable Soaps.

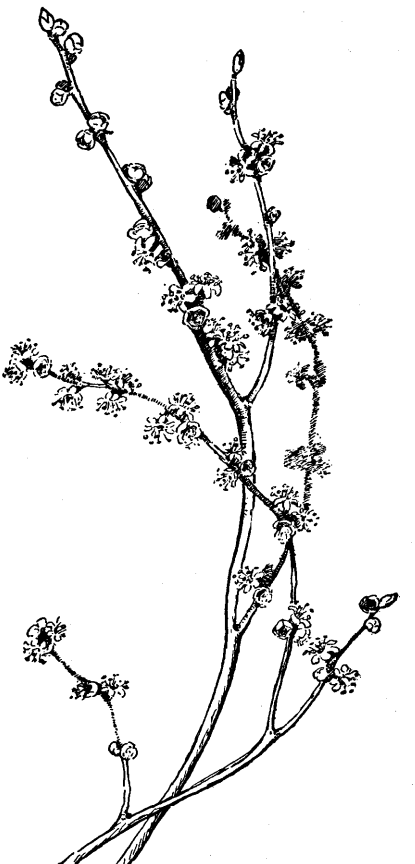
Another of the Revolutionary War substitutes was the foliage of the so-called Labrador Tea *(Ledum Groenlandicum,* Oeder), a low evergreen shrub of cold bogs throughout Canada and the northeastern United States as far south as Pennsylvania. A distinguishing feature is in the narrow, leathery leaves with margins rolled back and a coating of rusty wool on the under side. When pinched the foliage exhales a slight fragrance.

The familiar Sassafras of rich woods, old fields and fencerows on the Atlantic side of the country attracted attention very early in colonial days, and all sorts of virtues as a remedial agent were ascribed to it. During the Civil War, Sassafras tea became a common substitute for the Chinese article, and as a spring drink for purifying the system it still has a hold on the popular affection. The root is the part generally utilized, an infusion of the bark being made which is aromatic and stimulant. The flowers also may be similarly treated.

Of the same family with the Sassafras and of

much the same distribution is the common Spicewood, Wild Allspice, or Feverbush[1] *(Lindera Benzoin,* Blume), a shrubby denizen of damp woods and moist grounds, easily recognized in early spring by the little bunches of honey-yellow flowers that stud the branches before the leaves appear. The whole bush is spicily fragrant, and a decoction of the twigs makes another pleasant substitute for tea, at one time particularly in vogue in the South. Dr. Porcher states that during the Civil War soldiers from the upper country in South Carolina serving in the company of which he was surgeon, came into camp fully supplied with Spicewood for making this fragrant, aromatic beverage. Andre Michaux, a French botanist who traveled afoot and horse-back through much of the eastern United States when it was still a wilderness, half starving by day and sleeping on a deer-skin at night, has left in his journal the following record of the virtues of Spicewood tea, served him at a pioneer's cabin : "I had supped the previous evening [February 9, 1796] on tea made from the shrub called Spicewood. A handful of young twigs or branches is set to boil and

1 Also called Benjamin-bush, corrupted from benzoin, an aromatic gum of the Orient which, however, is derived from quite another family of plants. French-Canadians used to call the Spicewood, poivrier, which means pepper plant.



SPICEWOOD
(Lindera Benzoin)

after it has boiled at least a quarter of an hour, sugar is added and it is drunk like tea:. . . I was told milk makes it much more agreeable to the taste. This beverage restores strength, and it had that effect, for I was very tired when I arrived. ” The scarlet berries that cling like beads to the branches in the autumn used to be dried and powdered for use as a household spice, whence, obviously, the name Wild Allspice sometimes given to the shrub.

The warm, birchy flavor of the creeping Wintergreen *(Gaultheria procumbens,* L., the use of whose berries was noted in the previous chapter) could hardly have failed to attract attention to the plant as a likely substitute for Chinese tea when the latter was unobtainable; and one of its popular names, Teaberry, indicates that that is what happened-an infusion of the leaves being made. A pleasant and wholesome drink may also be made from the foliage of one of the Goldenrods—*Solidago odora,* Ait. This is a slender, low-growing species with one-sided panicles of flowers, not uncommon in dry or sandy soil from New England to Texas and distinguished by an anise-like fragrance given off by the minutely dotted leaves when bruised. A common name for it is Mountain Tea, and in some parts of the country the gathering of the leaves to dry and

peddle in the winter has formed a minor rural industry, yielding a modest revenue.

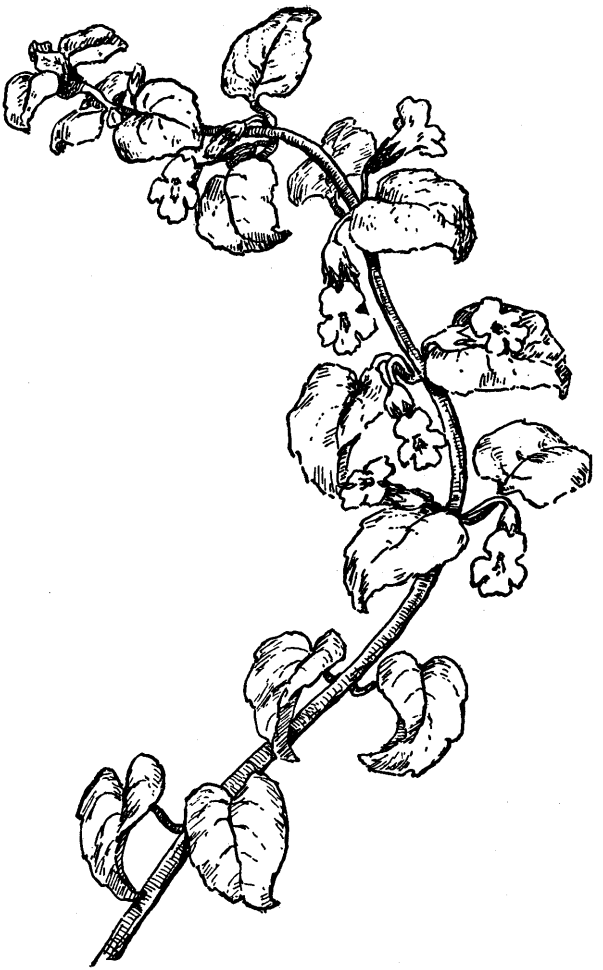
The devotees of coffee, too, have found in the wilderness places substitutes for their cheering cup. One of these is the seed of the Kentucky Coffee-tree *(Gymnocladus Canadensis,* Lam.), a picturesque forest tree with double-compound leaves occurring from Canada to Oklahoma. In winter it is conspicuous because of the peculiar clubby bluntness of the bare branches, due to the absence of small twigs and branchlets, which gives to the whole tree a lifeless sort of look that gained for it among the French settlers the name *Chicot,* a stump. In the autumn the female trees (the species is dioecious) are seen hanging with brown, sickle-like pods six to eight inches long and an inch or two wide, and containing in the midst of a sweetish pulp several hard, flattish seeds. If we are to judge from the popular name it was probably the pioneers in Kentucky that first had an inspiration to roast these seeds and grind them for beverage purposes. The fact is, however, that a century ago such use of them was quite prevalent in what was then the western wilderness, and travelers' diaries of the time make frequent mention of the practice. The journal, for instance, of Major

Long's expedition to the Rocky Mountains in 1819-20 records that while in winter camp on the Missouri River near Council Bluffs, the party substituted these seeds for coffee and found the beverage both palatable and wholesome. Thomas Nuttall, the botanist, who botanized the following year around the mouth of the Ohio River, testifies to the agreeableness of the parched seeds as an article of diet, but thought that as a substitute for coffee they were "greatly inferior to cichorium."

Cichorium is the botanists' way of saying Chicory, the plant that has been referred to already as producing leaves useful as a salad. Its root has had a rather bad name as an adulterant of coffee, in which delusive form it has perhaps entered more human stomachs than the human mind is aware of. As a drink in itself, sailing under its own colors, Chicory is not a bad drink, the root being first roasted and ground. It is rather surprising, by the way, to learn that a palatable beverage is possible from steeping the needles of the Hemlock tree *(Tsuga Canadensis,* Carr.)-which is not to be confused with the poisonous herb that Socrates died of. Hemlock tea is, or at least used to be, a favorite drink of the eastern lumbermen, and I have myself drunk it

with a certain relish. Similarly the leaves of the magnificent Douglas Spruce *(Pseudotsuga taxifolia,* Britt.) of the Pacific coast produce by infusion a beverage which many Indians and some whites have esteemed as a substitute for coffee.

The Mint family, well advertised by the pronounced and usually agreeable fragrances given off by its members, has been utilized as a source less of ordinary beverages than of medicinal teas, administered in fevers and digestive troubles. Such plants of the former sort as have come to my notice are all western. One of these has, in fact, played both roles. This is the aromatic little vine known in California as Yerba Buena (the botanist's *Micromeria Douglasii,* Benth.) , found in half shaded woods and damp ravines of the Coast Ranges from British Columbia to the neighborhood of Los Angeles. Its dried leaves steeped for a few minutes in hot water make a palatable beverage mildly stimulating to the digestion, and, like real tea, even provocative of gossip ; for it is an historic little plant, this Yerba Buena, which gave name to the Mexican village out of which the city of San Francisco afterwards rose. The two words, which mean literally " good herb, " are merely the Spanish for our term "garden mint," of whose qualities the



YERBA BUENA
(Micromeria Douglasii)

wild plant somewhat partakes[1] Of the Mint tribe, also, is the herb *Chia,* about whose edible seeds something has been said. At the present day, *Chia* is better known as a drink than as a food. A teaspoonful of the seeds steeped in a tumbler of cold water for a few minutes communicates a mucilaginous quality to the liquid. This may be drunk plain, but among the Mexicans, who are very fond of it as a refreshment, the customary mode of serving it is with the addition of a little sugar and a dash of lemon juice. The tiny seeds, which swim about in the mixture, should be swallowed also, and add nutrition to the beverage. A Spanish-California lady of the old school gave me my first glass of Chia, and recommended it as *"mejor que ice-cream"* (better than ice cream).

Of quite a different sort, but equally refreshing and easy to decoct, is the woodland drink called "Indian lemonade," made from the crimson, berry-like fruits of certain species of Sumac. East of the Rockies there are three species abundant, dis-

1 The mint of the gardens *(Mentha viridis* and, to a less extent, *M. piperita)* is a common escape in damp ground and by streamsides throughout the country. In the Southwest the leaves, under the name of Yerba Buena, are used in the same way as those of Micromeria. A steaming hot infusion of mint leaves is a bracing beverage highly esteemed by tired, wet vaqueros coming in at evening from their day's work on the range.

SUMAC
(Rhus glabra)

tinguished by compact, terminal, cone-like panicles of white flowers and pinnate leaves that turn all glorious in the autumn in tones of orange and red. They are *Rhus typhina,* L. (Staghorn Sumac), *R. glabra,* L. (Smooth Sumac), and *R. copallina,* L. (Dwarf Sumac). The first is sometimes a small tree; the others are shrubs. In the Rocky Mountain region and westward *Rhus trilobata,* Nutt., is frequent-the Squaw-bush, as it is called, because the branches are extensively used by the Indian women in basketry; and on the Pacific coast, *Rhus ovata,* Wats., and *R. integrifolia,* B. & H., stout shrubs or small trees, occur. The last two have leathery, entire leaves quite unlike those of the eastern species, and the white or pinkish flowers are borne in tight little clusters. The berries of all these sumacs are crimson and clothed with a hairy stickiness that is pleasantly acid and communicates a lemon-like taste to water in which the fruit has been soaked for a few minutes. These plants-particularly the western species-are often found growing on hot, waterless hillsides, and their fruits offer a grateful refreshment to the thirsty traveler, whether sucked in the mouth until bared of their acid coating, or steeped in water to serve as a woodland lemonade. The three far western species are com-

LEMONADE-BERRY
(Rhus integrifolia)

monly known as Lemonade-berry, and *R. integrifolia* is also sometimes called "mahogany" because of its hard wood, dark red at the heart. The Spanish people call it *mangla,* a name they give to some other sumacs as well.

The berries of the Manzanita, a Pacific coast shrub that was described in an earlier chapter, make an exceptionally agreeable cider. This is one of the harmless beverages of Indian invention, and I cannot, perhaps, do better than to quote the method that Chesnut describes in his treatise on the "Plants Used by the Indians of Mendocino Co., California." Ripe berries, carefully selected to exclude any that are worm-eaten, are scalded for a few minutes or until the seeds are soft, and then crushed with a potato masher. To a quart of this pulp an equal quantity of water is added, and the mass is then poured over a layer of dry pine needles or straw placed in a shallow sieve basket and allowed to drain into a vessel beneath; or sometimes the mass is allowed to stand an hour or so before straining. When cool, the cider, which is both spicy and acid, is ready for use without the addition of sugar. A better quality of cider is said to result if the pulp alone is used. The dried berries, in the latter case, are pounded to a coarse powder, and then by clever

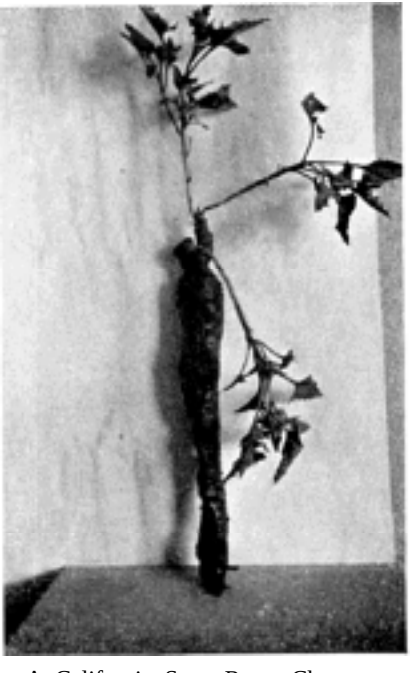
manipulation and tossing in a flat basket-a process at which the Indian woman is an adept-the heavier bits of seed are made to roll off while the fine particles of pulp cling to the basket.

The desert, too, has its beverage plants. There, if anywhere, pure water takes its place as the most luxurious of drinks, and the sands bear at least one group of plants from which good water may be obtained, namely, the Barrel Cactuses *(Echinocactus)* of the Southwest, of which something has been said under another head. The juices of most cacti, while often plentiful, are as often bitter to nauseousness; but those of the Barrel Cactus-or at least of certain species-are quite drinkable, and the rotund, keg-like plants serve a very important purpose as reservoirs of soft water. This is readily obtainable by horizontally slicing off the top and pounding up the succulent, melon-like pulp with a hatchet or piece of blunt, hard wood that is not bitter. In this way the watery content is released and may be dipped out with a cup. In the case of some species, I believe, the juice is too much impregnated with mineral substances to be drinkable ; but in others-as *Echinocactus Wislizeni,* Engelm., *E. Emoryi,* Engelm., and *E. cylindraceus,* Engelm.-the fluid obtained is clear and pleasant to the taste, quenching the thirst satis-

factorily. An odd and all but forgotten use of these vegetable water barrels of the desert is their former employment by Indians as cooking vessels. The fleshy interior was scooped out and the shell treated as a pot, into which water (secured by the mashing up of the pulp) was poured, heated with hot stones and these withdrawn as they cooled and replaced with hotter. Meantime the meat and other edibles were dropped in and allowed to simmer until done. Upon breaking camp, the cook abandoned her impromptu kettle, depending upon finding material for a new one at the next stopping place.

Throughout the arid and semi-desert regions of the Southwest from New Mexico to Southern California, a peculiar plant called *Ephedra* by the botanists is abundant. There are several recognized species but all have so strong a family resemblance that in popular parlance they are lumped as one and spoken of as Desert Tea or Teamster's Tea. They are shrubby plants, two or three feet high, greenish-yellow and distinguished by slim, cylindrical, many-jointed stems and abundant opposite branches, the leaves reduced to mere scales. The clustered flowers, inconspicuous and borne in the axils of the branches, of two sorts on different plants, the pistillate producing solitary, black seeds of intense

Echinocactus, a vegetable water barrel of the Southwestern deserts.



A California Soap Root, Chenopodium Californicum (See page 174)

bitterness. The plant is well stocked with tannin, and an infusion of the branches-green or dried-in boiling water has long been in favor with the desert people, red and white. Desert Tea was first adopted by the white explorers and frontiersmen as a medicinal drink, supposed to act as a blood purifier and to be especially efficacious in the first stages of venereal diseases; but its use at meals as an ordinary hot beverage in substitution for tea or coffee is by no means uncommon, and cowboys will sometimes tell you they prefer it to any other. The Spanish-speaking people call the plant *Cañutillo,* a word meaning little tube or pipe. Similarly used is the *Encinilla* or Chaparral Tea *(Croton corymbulosis,* Engelm.), a gray-leaved plant of the Euphorbia family found in western Texas and adjacent regions. The flowering tops are the part employed, and an infusion of them is palatable to many. Dr. Havard, in an article on " The Drink Plants of the North American Indians, "[2] stated that in his experience not only Mexicans and Indians enjoyed it, but that the colored United States soldiers of the southwestern frontier preferred it to coffee. The plant contains certain volatile oils but apparently no stimulating principle. *Thelesperma,* a Southwestern

2. Bulletin Torrey Botanical Club. Vol. XXIII, No. 2.

genus of herbaceous plants of the Composite family, somewhat resembling Coreopsis, with opposite, finely dissected, strong-scented leaves and yellow flowers (sometimes without rays), furnishes a species or two used as substitutes for tea by the Mexican population. *Thelesperma longipes*, Gray, occurring from western Texas to Arizona, is commonly known as Cota, and is said to give a red color to the water in which it is boiled.

Much more appealing to the average taste is a drink that Mexicans sometimes make from the oily kernels of the *jojoba* nut of Southern California and northern Mexico *(Simmondsia Californica*, described previously). Mr. Walter Nordhoff, of San Diego and Los Angeles, informs me that the process followed is first to roast them and then treat them in the same way as the Spanish people prepare their chocolate. This, I believe, is to grind the kernels together with the yolk of hard boiled egg, and boil the pasty mass in water with the addition of sugar and milk. When they can afford it a pleasant flavoring is given by steeping a vanilla bean for a moment or two in the hot beverage. This makes a nourishing drink as well as a savory substitute for one's morning chocolate or coffee. A substitute for chocolate among the American population of some sec-

tions of the United States is furnished by the reddish-brown, creeping rootstock of the Purple or Water Avens *(Geum rivale,* L.), a perennial herb with coarse, pinnate basal leaves and 5-petaled, purplish, nodding flowers, borne on erect stems a couple of feet high. The plant is frequent in low grounds and swamps throughout much of the northern part of the United States and in Canada, as well as in Europe and Asia. The rootstock is characterized by a clove-like fragrance and a tonic, astringent property, and has been used by country people in decoction as a beverage, with milk and sugar, under the name of Indian Chocolate or Chocolate-root. It is the color, however, rather than the taste that has suggested the common name. Lucinda Haynes Lombard, writing in " The American Botanist " for November, 1918, mentions a curious popular superstition to the effect that friends provided with Avens leaves are able to converse with one another though many miles apart and speaking in whispers !

Readers of literature concerning old time explorations in America will perhaps recall passages in the reports of various writers devoted to accounts of a beverage called Yaupon, Cassena, or the Black Drink, formerly in great vogue among the Indians of the Southern Atlantic States and colonies. One

of those ancient chroniclers who did so much to misinform Europe about the New World and its products, speaks of this Black Drink as a veritable elixir that would "wonderfully enliven and invigorate the heart with genuine, easie sweats and transpirations, preserving the mind free and serene, keeping the body brisk and lively, not for an hour or two, but for as many days, without other nourishment or subsistence." (!) William Bartram, to whose account of the Indian uses of Southern plants something over a century ago reference was made in an earlier chapter, speaks of spending a night with an Indian chief in Florida, smoking tobacco and drinking Cassena from conch shells. Bartram does not seem to have liked his Cassena, and in point of fact few white people ever did; but the wide prevalence of its consumption among the Southern Indians, who once drove a brisk inter-tribal trade in the leaves, and the fact that the Cassena plant is nearly related to the famous Paraguyan drink *yerba mate,* have created some latter-day interest in the Black Drink. The plant from which it is made is a species of spineless Holly or Ilex *(I. vomitoria,* Ait.), frequent in low woods from Virginia to Florida and Texas. It is a shrub, or sometimes a modest tree, with small, evergreen leaves which are elliptic in

shape and notched around the edge, and in autumn the branches are prettily studded with red berries about the size of peas. An analysis of the dried

CASSENA
(Ilex vomitoria)

leaves reveals a small percentage (one-quarter of one per cent.) of caffeine, about half the quantity of the same alkaloid that is contained in the leaves of

maté (Ilex Paraguayensis). The leaves were customarily toasted, thoroughly boiled in water, and then cooled by pouring rapidly from one vessel to another and back again, which also developed frothiness. The liquid is, as the name indicates, of a black color, and is quite bitter. Dr. E. M. Hale, who made a special study of the subject and had the results published by the United States Department of Agriculture [3] a number of years ago, pronounced it a not unpleasant beverage, for which a liking might readily be acquired as for *maté,* tea or coffee-in fact somewhat suggesting in taste an inferior grade of black tea. When very strong from long boiling, it will act as an emetic-a consummation lightly regarded by the Indians, who merely drank again.

Two other species of Ilex growing wild throughout a greater part of the length of our Atlantic seaboard possess leaves that have been similarly used as substitutes for Chinese tea. One is *I. glabra,* Gray, popularly known as Inkberry, a rather low-growing shrub of sandy soils near the coast, with shiny, wedge-shaped, evergreen leaves, and ink-black berries; the other, *I. verticillata,* Gray, a much taller shrub, with deciduous foliage, and bright red berries clustered around the stems and persisting in winter.

[3] Bulletin 14, Division of Botany.

The latter species is called in common speech Black Alder or Winter-berry; and frequents swampy ground as far west as the Mississippi.

The spicy, aromatic inner bark and young twigs of the Sweet or Cherry Birch *(Betula lenta,* L.) also deserve mention, as the basis of that old-time domestic brew, birch beer. The characteristic flavor is due to an oil like that distilled from Wintergreen *(Gaultheria procumbens):* This species of birch is a graceful forest tree with leaves and bark suggesting a cherry, and is of frequent occurrence in rich woodlands of the Atlantic seaboard States. The sap is sweet, like the Sugar Maple's, and may be similarly gathered and boiled down into a sugar. The nearly related River Birch *(Betula nigra,* L.), a denizen of low grounds and streamsides throughout much of the eastern United States, particularly southward, is a potential fountain in early spring when the sap is running. At that season, if you stab the trunk with a knife, stick into the cut a splinter to act as a spout, then set a cup beneath to catch the drippings, you will have shortly a draught as clear and cool as spring water, with an added suggestion of sugar. The tree is distinguished by slender, drooping branches, which sleet storms in winter sometimes badly shatter and break. From such untended

wounds, hundreds in number, the sap later on will drop pattering to the ground; and I have stepped from bright sunshine on a March day into the shadow of one of these trees and been sprinkled by the descending spray as by a shower of rain.